

03060109-060

(Savannah River)

General Description

Watershed 03060109-060 is located in Hampton and Jasper Counties and consists primarily of the **Savannah River** and its tributaries from Ebenezer Creek (in Georgia) to the Atlantic Ocean. The watershed occupies 117,041 acres of the Coastal Zone region of South Carolina. The predominant soil types consist of an association of the Santee-Lynchburg-Goldsboro-Bohicket-Argent series. The erodibility of the soil (K) averages 0.13, and the slope of the terrain averages 1%, with a range of 0-2%. Land use/land cover in the watershed includes: 39.4% forested wetland, 31.1% forested land, 12.0% agricultural land, 8.0% nonforested wetland, 4.7% water, 4.1% barren land, and 0.7% urban land.

This section of the Savannah River accepts drainage from its upper reaches (03060103, 03060106, 03060109-020, -050). Black Swamp accepts drainage from Long Branch, Cypress Branch, Big Boar Flat, Tew Lake, Cypress Creek, Umber Run*, Hodgins Lake, Chunk Creek, Tee Lake, Coleman Run, Ebenezer Creek*, Lockner Creek*, and Mill Creek*. An asterisk connotes a stream entering from the Georgia side of the river. Bear Creek* enters the river next, followed by Gator Holes, Coleman Lake, Far Lake, Meyer Lake, Big Collins Lake, and Abercorn Creek*.

Downstream of Abercorn Creek, McCoys Cut connects the Savannah River (now in Georgia) to the Little Back River (now the stateline). The Little Back River accepts drainage from Union Creek, Vernezobre Creek, and Clydesdale Creek before flowing into the Back River. The Middle River flows between the Savannah River and the Back River, with connections to both. Shubra Canal, Clydesdale Canal, and Murray Hill Canal drain into the Back River before it merges back into the Savannah River (again the stateline). South Channel* breaks out at the confluence and flows parallel to the Savannah River to the ocean. Elba Island Cut* connects South Channel to the Savannah River, and Fields Cut or the Mud River connects the Savannah River to the Wright River in the New River watershed. The Savannah River is Class SB* (DO not less than daily average 5 mg/l and minimum 4 mg/l) from the Seaboard Coastline Railroad to Ft. Pulaski, and Class SA from Ft. Pulaski to the Atlantic Ocean. The remainder of the watershed is FW. There are a total of 149.5 stream miles and 49.5 acres of lake waters, and 3,356 acres of estuarine areas within the South Carolina portion of the watershed.

Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
SV-744	BIO	FW	CYPRESS BRANCH AT US 321
SV-356	W	FW	CYPRESS CREEK AT S-27-119
SV-191	P	SB*	SAVANNAH RIVER AT US 17, 8.9MI SSW OF HARDEEVILLE

Cypress Branch (SV-744) - Aquatic life uses are fully supported based on macroinvertebrate community data.

Cypress Creek (SV-356) - Aquatic life uses are not supported due to dissolved oxygen excursions. Although pH excursions occurred, they are typical of values seen in blackwater systems and are

considered natural, not standards violations. Recreational uses are fully supported.

Savannah River (SV-191) - Aquatic life uses are fully supported. This is a tidally influenced system with marsh drainage, characterized by naturally low pH and dissolved oxygen concentration. Although pH and dissolved oxygen excursions were noted, they were typical of values seen in such systems and are considered natural, not standards violations. There is a significant increasing trend in pH. A significant decreasing trend in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions.

A fish consumption advisory has been issued by the Department for mercury and includes the Savannah River within this watershed (see advisory p.116).

Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-097	GB	TERTIARY LIMESTONE	HARDEEVILLE

All water samples collected from ambient monitoring well **AMB-097** met standards for Class GB groundwater.

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
SAVANNAH RIVER BJW&SA/HARDEEVILLE CHURCH ROAD PIPE #: 001 FLOW: 1.01	SC0034584 MAJOR DOMESTIC
BLACK SWAMP TO SAVANNAH RIVER YOUMANS FISH PONDS PIPE #: 001 FLOW: 0.5	SCG130004 MINOR INDUSTRIAL

Nonpoint Source Management Program

Mining Activities

<i>MINING COMPANY MINE NAME</i>	<i>PERMIT # MINERAL</i>
COASTAL SAND INC. KEIFFER MINES	1075-53 SAND
MALPHRUS CONSTRUCTION CO. NEW HARDEEVILLE MINE	1251-53 SAND
MALPHRUS CONSTRUCTION CO. OAKWOOD MINE	1231-53 SAND/CLAY

MALPHRUS CONSTRUCTION CO.
2930 LAKE

1254-53
SAND/CLAY

Water Quantity

*WATER USER
STREAM*

*TOTAL PUMP. CAPACITY (MGD)
RATED PUMP. CAPACITY (MGD)*

BJWSA
SAVANNAH RIVER

40.2
31.2

Growth Potential

There is a moderate potential for growth in this watershed, primarily in the vicinity of the Town of Hardeeville. The proposed siting of the DaimlerChrysler van plant across the Savannah River from Hardeeville should also provide residential and commercial growth to the area. Portions of the Towns of Scotia and Furman are located at the top of the watershed, where there is a lower potential for growth. Beaufort-Jasper Water and Sewer Authority is in the process of expanding the wastewater treatment facility, which should promote future growth. Less than 25% of the total land area is suitable for septic system installations; and another 25% or less is classified as marginally suitable. Also, growth in the area tends to be spread out over a large area not served by a sewer system. The Savannah National Wildlife Preserve and the Tybee Island National Wildlife Preserve are located at the base of this watershed, and would limit growth in these areas.